

IN THE CLAIMS:

Please cancel Claims 1 – 10 and 14 – 17 without prejudice, amend Claim 12, and add Claims 18 – 38 so that the pending claims read as follows:

11. (Unchanged) An improved catheter system of the type including (a) a tubular catheter body having a proximal tubular portion, a distal tubular portion, and a lumen therethrough, and (b) a drive cable rotatably received in the lumen, wherein the improvement comprises an intermediate tubular portion formed on the tubular catheter body of a transitional material between the proximal tubular portion and the distal tubular portion, the transitional material being of a higher flexural modulus than the distal tubular portion and of a lower flexural modulus than the proximal tubular portion.

a2 12. (Amended) The improved catheter system of claim 11, wherein the proximal tubular portion comprises a material taken from the group consisting of natural polymers, synthetic polymers, and plastic materials.

13. (Unchanged) The improved catheter system of claim 11, wherein the intermediate tubular portion comprises a material taken from the group consisting of nylons, polyester, polyimides, polyolefins, and blends of such materials.

a3 18. (New) The improved catheter system of claim 11, wherein the proximal tubular portion comprises a material taken from the group consisting of silicone rubber, natural rubber, polyvinylchloride, polyurethanes, polyesters, polyethylene, polytetrafluoroethylene (PTFE), and polyetheretherketone (PEEK).

19. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion is adhesively bonded with the proximal tubular portion and with the distal tubular portion.

20. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion is thermally bonded with the proximal tubular portion and with the distal tubular portion.

22. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion has a length between 40 and 100 mm.

23. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion is connected with the distal tubular portion at a point between about 100 and 400 mm from a distal end of the tubular catheter body.

24. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion is connected with the distal tubular portion at a point approximately 150 mm from a distal end of the tubular catheter body.

25. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion has a flexural modulus between 50 and 220 kpsi.

26. (New) The improved catheter system of claim 11, wherein the intermediate tubular portion has a flexural modulus between 150 and 190 kpsi.

27. (New) A catheter system comprising:
a tubular catheter body having a proximal tubular portion, an intermediate tubular portion, a distal tubular portion, and a lumen therethrough, wherein the intermediate tubular portion is formed on the tubular catheter body of a transitional material between the proximal tubular portion and the distal tubular portion, the transitional material being of a higher flexural modulus than the distal tubular portion and of a lower flexural modulus than the proximal tubular portion; and

a drive cable rotatably received in the lumen.

28. (New) The catheter system of claim 27, wherein the intermediate tubular portion has a flexural modulus between 50 and 220 kpsi.

29. (New) The catheter system of claim 27, wherein the intermediate tubular portion has a flexural modulus between 150 and 190 kpsi.

31. (New) The catheter system of claim 27, wherein the proximal tubular portion comprises a material taken from the group consisting of silicone rubber, natural rubber, polyvinylchloride, polyurethanes, polyesters, polyethylene, polytetrafluoroethylene (PTFE), and polyetheretherketone (PEEK).

32. (New) The catheter system of claim 27, wherein the intermediate tubular portion comprises a material taken from the group consisting of nylons, polyester, polyimides, polyolefins, and blends of such materials.

33. (New) The catheter system of claim 27, wherein the intermediate tubular portion is adhesively bonded with the proximal tubular portion and with the distal tubular portion.

34. (New) The catheter system of claim 27, wherein the intermediate tubular portion is thermally bonded with the proximal tubular portion and with the distal tubular portion.

35. (New) The catheter system of claim 27, wherein the intermediate tubular portion has a length between 20 and 200 mm.

36. (New) The catheter system of claim 27, wherein the intermediate tubular portion has a length between 40 and 100 mm.

37. (New) The catheter system of claim 27, wherein the intermediate tubular portion is connected with the distal tubular portion at a point between about 100 and 400 mm from a distal end of the tubular catheter body.

38. (New) The catheter system of claim 27, wherein the intermediate tubular portion is connected with the distal tubular portion at a point approximately 150 mm from a distal end of the tubular catheter body.